National Aeronautics and
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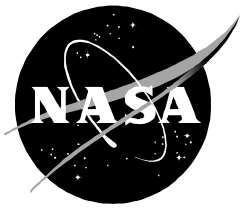


Statement of Work

for

NASA Glenn Education Support Services (ES2)

NASA Glenn Research Center

July 19, 2012

1.0 INTRODUCTION

The National Aeronautics and Space Administration's (NASA) journey into air and space has deepened humankind's understanding of the universe, advanced technology breakthroughs, enhanced air travel safety and security, and expanded the frontiers of scientific research. These accomplishments share a common genesis: Education. As the United States begins the second century of flight, the Nation must maintain its commitment to excellence in Science, Technology, Engineering and Mathematics (STEM) education to ensure that the next generation of Americans can accept the full measure of their roles and responsibilities in shaping the future. NASA will continue its tradition of investing in the Nation's educational programs and supporting the country's educators who play a key role in preparing, inspiring, exciting, and encouraging the Nation's students who will become the next generation of scientists, engineers, researchers, and astronauts.

NASA's Glenn Research Center (GRC) Educational Programs Office (EPO) (see Appendix B) is a leader in designing, developing, and implementing educational programs at national, regional, and local levels. NASA EPO sponsors and manages Higher Education opportunities in close collaboration with the University Programs (UP) Office (see Appendix C). Participants of the GRC on-site and on-campus NASA Higher Education programs include undergraduates, graduate students, postdoctoral fellows and faculty in accredited US universities and colleges. GRC has oversight responsibility for STEM-related Higher Education programs which include undergraduate and graduate internships, graduate fellowships toward advanced degrees, undergraduate and graduate scholarships, and postdoctoral fellowships. The GRC EPO serves both informal education communities (i.e. museums, science centers, and community organizations) and formal education communities (i.e. institutions of elementary, secondary, and higher education). The EPO consists of five teams whose purpose and audience is noted in the table below.

EPO Team	Objective
Higher Education Team	Provide opportunities and support systems that recruit, retain, and develop undergraduate and graduate students in STEM-related disciplines.
Formal/Informal Student Team	Provide NASA experiences that inspire student interest and achievement in STEM disciplines.
Teacher Team	Develop NASA's leadership role in national STEM improvement efforts, as demonstrated by provision of meaningful educator professional development and student experiences, adoption of education technologies, and contributions to STEM education policies and strategies.
Project Support Team	Provide enabling technology and infrastructure to support teacher and student interventions.
Project Control Team	Ensure continuous improvement and efficiency through the monitoring of project performance.

The EPO currently has numerous independent contractors who provide administrative and programmatic support directly to the office, as well as, the educational programs administered by the office. The intent of this procurement is to consolidate the existing contractual vehicles (i.e. cooperative agreements, grants, and contracts) across the first 20 months of performance. The Agency and Center Officials will make decisions on the amount of support required to operate the office and educational programs as the contract progresses. Decision factors include: available funding, historical success of the educational programs, and future needs of the EPO. New educational programs may be added to this procurement at the discretion of the Agency and Center. The contractor shall respond to the future needs of the EPO with streamlined and consolidated management plans which provides efficiency in resources (including web-based tools), a highly integrated and skilled program support staff, and lower operational costs- all while maintaining NASA's educational objectives of advancing high quality STEM education.

The GRC administers educational programs at the international, national, regional, and local levels. For purposes of this procurement, National programs are defined as programs implemented on a scale beyond Glenn Research Center's regional area of responsibility, and that require close coordination with other NASA Centers, NASA Headquarters, and strategic partners. Regional programs are defined as programs implemented only in GRC's six-state region that consists of: Ohio, Illinois, Indiana, Minnesota, Wisconsin and Michigan. Local programs are defined as programs implemented within an approximate radius of fifty miles of GRC. A summary of current educational and higher educational projects administered by the GRC is provided in Appendix A for reference purpose only.

2.0 INDEFINITE DELIVERY INDEFINITE QUANTITY (IDIQ) TASKS

The Contractor shall provide all management, labor, supervision, material, and equipment to successfully manage all contract activities with the exception of items provided as Government Furnished Property and Services (discussed in subsequent section). All work performed under the contract will be issued by individual task orders in accordance with Federal Acquisition Regulation Clause 52.216-18 entitled 'Ordering'. The type of work to be included in individual task orders is outlined in 2.01-2.08.

2.01 PROJECT FORMULATION, PLANNING, COORDINATION, & CONTROL

a. The Contractor shall conduct reviews of current peer-reviewed educational research to identify and recommend new programming and implementation strategies or to optimize the implementation of existing NASA programming.
b. The Contractor shall conduct literature reviews which examine existing educational efforts funded by public and/or private dollars at the local, regional, and/or national levels to identify and recommend best practices for program implementation at GRC's EPO.

c. The Contractor shall conduct discussions with potential customers and external audiences to identify needs, gaps in service, and opportunities to scale successful efforts and recommend programming aligned with customer feedback.
d. The Contractor shall support the development of project planning documents and strategies that align with Center and Agency policies and procedures.
e. The Contractor shall design and develop web pages, databases, virtual environments, and educational simulations to engage students, educators and the public in NASA education content that aligns with NASA.gov content and management requirements.
f. The Contractor shall work with NASA education and public affairs staff to update or modify existing content on the nasa.gov portal.
g. The Contractor shall ~~e~~nsure compliance with GRC EPO Business processes for project design, development, implementation, evaluation and close-out.
h. The Contractor shall review projects for fidelity of design principles, implementation and evaluation strategies, and recommend areas of improvement.
i. The Contractor shall conduct training in NASA GRC Education business processes.
j. The Contractor shall develop recommendations for the recruitment and retention of participants in NASA programming; especially female students and students who are from populations that are Underrepresented and Underserved in STEM fields and careers.
k. The Contractor shall develop briefing documents, presentations, issue papers, summary papers, and support documentation to support stakeholder meetings and discussions.
l. The Contractor shall periodically review implemented projects and training for compliance with all Center, Agency, and EPO policies, procedures, business processes and align projects and training as necessary.

2.02 EDUCATOR PROFESSIONAL DEVELOPMENT

a. The Contractor shall design and deliver long and short duration workshops, in-service presentations and training opportunities to support educators in the use of NASA Education resources through direct, in person support, scaffolding, mentoring, presentations on-site, off-site, and through web, video and collaborative technology which includes Video Teleconferencing System (ViTS) and Digital Learning Network (DLN).
b. The Contractor shall support educators in the customization of NASA Education resources to align with the needs of students and public audiences.
c. The Contractor shall support the alignment of NASA Education resources with national, state or district level education standards.
d. The Contractor shall support the alignment of NASA Education offerings with existing local, state or national STEM reform movements to address student achievement gains.
e. The Contractor shall implement strategies to recruit educators into NASA Education offerings.

2.03 STUDENT OPPORTUNITIES

a. The Contractor shall design and deliver opportunities that will engage students in NASA Education content on-site at NASA facilities, and through web video and collaborative technology.
b. The Contractor shall design and deliver opportunities that will engage students in NASA Education content off-site in classrooms, museums, science centers and informal settings, and through web video and collaborative technology.
c. The Contractor shall design and deliver opportunities that will allow students to interact with NASA subject matter experts or use NASA mission data in formal and informal education settings.
d. The Contractor shall design and deliver student orientations and mentor training as needed.
e. The Contractor shall implement strategies to recruit participants into student opportunities - in particular students who are traditionally underrepresented in STEM fields or underserved by federal programming.
f. The Contractor shall coordinate the pairing of participants with NASA subject matter experts and mentors to support shadowing and internship opportunities for on-site Student Programs and activities.
g. The Contractor shall coordinate the pairing of participants with NASA subject matter experts and tutors to support classroom projects, tutoring opportunities, local and national STEM initiatives for off-site Student Programs and activities.
h. The Contractor shall track participant data as specified by NASA such as: registration information, demographic data, session attendance, re-enrollment, college and beyond for UP, and future course selection (i.e. when students are in middle and/or high-school).
i. The Contractor shall adhere to NASA EPO business policies in the review of student applications and make recommendations to EPO project management on program participation for internship, scholarship, shadowing, onsite, offsite and special education events where audience size is a limiting factor or opportunities are awarded competitively.

2.04 CURRICULUM DEVELOPMENT

a. The Contractor shall design and develop standard's based, inquiry based, age appropriate lessons plans, design challenges, curriculum support materials, classroom demonstrations and educator guides for implementation in formal and informal settings that use the NASA mission as a context for student engagement and learning.
b. The Contractor shall adhere to NASA curriculum development guidelines including beta testing and the use of focus groups to optimize content prior to release.
c. The contractor shall periodically conduct beta testing and analysis of current curriculum offerings with focus groups from target audiences and develop recommendations to enhance offerings.

2.05 ADMINISTRATION OF SUB-AWARDS

a. The Contractor shall provide operational and administrative support to identify, select and provide sub-awards for scholarships, internships, fellowships, grants and cooperative agreements, and selection support for travel and other funded support opportunities.
b. The Contractor shall develop and administer scholarship opportunities for students at the undergraduate and graduate levels; paid internship and fellowship opportunities for students at the high school, undergraduate, and graduate levels and faculty from K-12, higher education institutions and University Affairs Officer.
c. The Contractor shall develop selection criteria and a process to recommend fellowships, scholarship and internship recipients to NASA EPO Project Manager and University Affairs Officer.
d. The Contractor shall provide financial administration and logistical coordination of travel arrangements for students and other participants to attend items such as: forums, workshops, research experiences, and other special opportunities at GRC, other NASA Centers, and other partner sites.

2.06 SPECIAL PROJECTS

a. The Contractor shall support Agency and Center Special Projects including management of student competitions, special recruitment events (i.e. national conferences), community outreach events, and outreach to museums and science centers.
b. The Contractor shall provide the following support for Community Outreach events: setup of exhibits, staffing for exhibits, and teardown of exhibits.
c. The Contractor shall coordinate all outreach efforts with the Exhibit and Outreach support Contractors.

2.07 DATA COLLECTION, ANALYSIS AND DEVELOPMENT

a. The Contractor shall recommend evaluation and statistical analysis methodology based upon current industry good practice in education project evaluation.
b. The Contractor shall develop data collection strategies for the collection of data to address Agency, Center, and project specific needs.
c. The Contractor shall develop interview protocols, surveys, questionnaires, inventories and other data collection tools.
d. The Contractor shall be responsible for the development and maintenance of databases and web applications to support data collection, demographic data, longitudinal tracking of participant information, project registration, and project operations that align with NASA GRC information technology requirements.
e. The contractor shall comply with NASA Technical standards and ensure interoperability and security with other NASA systems.
f. The Contractor shall align with all government regulations and NASA policies pertaining to the collection, storage and use of data collected from the public.

g. The Contractor shall submit data collection instruments to the responsible NASA Official for approval through the NASA HQ Evaluation Manager.
h. The Contractor shall collect Agency required surveys and summary forms in the Office of Education Performance Management (OEPM) System Information located at: oepm.nasa.gov
i. The Contractor shall adhere to NASA policy on evaluation of project participants and collection of participant's evaluation instrument using OEPM or hard-copy formats if an OEPM system is unavailable. If hard-copy is utilized, the Contractor shall ensure that the data is inputted according to and within the established due dates into the OEPM system.
j. The Contractor shall conduct analyses of project data to determine effectiveness of efforts, identify gaps, attainment of NASA Agency Annual Performance Goals (APG) and GRC Center level goals and identify successful practices or areas of improvement. Information on current APG's and samples of historic performance assessment can be found at http://www.nasa.gov/offices/education/performance/index.html.
k. The Contractor shall summarize and present findings.
l. The Contractor shall support the development of lessons learned documentation.
m. The Contractor shall develop and maintain a NASA Education Lessons Learned database.
n. The Contractor shall utilize evaluation results for Project Formulation, Planning, Coordination, & Control of future projects.

2.08 REPORTS

a. The EPO Intranet houses participant and mentor information for on-site Student/Teacher Programs as a reporting tool in addition to OEPM. Participant (student/educators/mentors) numbers shall be reported upon conclusion of the project.
b. Management Operations Plan (Annual): The Contractor shall submit by October 10th of each year, a comprehensive management operations plan containing, at a minimum, the following: a staffing plan with an organizational structure, an operations plan, a communications plan and company policies and procedures.
c. Comprehensive Technical Task Report (Annual): The Contractor shall submit by October 10th of each year, a comprehensive technical task report containing a summary of all tasks and their elements, performed by the contractor during the previous fiscal year.
d. Management/Technical Reports (Monthly/Quarterly): The Contractor shall submit monthly/quarterly progress reports by the 10th of each month. Each report must detail the progress made in the prior month, problems, status, and other elements required by Federal Acquisition Regulations (FAR) Clause 52.227-97 entitled 'Technical Reports for Task Order Contracts'. The Contractor shall, also, include the status of qualifications and certifications for any employee hired during the month, and continue to do so until all necessary certifications have been met for the subject employee.

e. Cost Reports (Monthly): The Contractor shall submit monthly Cost Reports (also known as NF-533 Reports) in accordance with NASA FAR Supplement Clause 1852.242-73 entitled 'NASA Contractor Financial Management Reporting.'
f. Safety Reports (Monthly): The Contractor shall submit a 'Service Contract Injury Report' within seven (7) days after the end of each month. In the event of an accident involving Contractor personnel during the performance of the contract, the Contractor shall submit a 'NASA Mishap Report (NASA Form 1627) within one workday after the incident.
g. Task Updates (Bi-Weekly): The Contractor shall provide bi-weekly task updates to the cognizant NASA Task Manager.
h. Task Specific Reports (As specified in Tasks): The Contractor shall submit all additional reports required by specific task orders by the dates specified in the task orders.
i. Implementation Site Visit Report (Within Two Weeks after Site Visit): The Contractor shall provide a written summary of the site visit to NASA and the site visit host within two weeks after the visit. The report shall include feedback from the contractor and site visit host in regards to project success, issues and concerns, specific needs, recommendations and other issues related to successful contract performance.
j. The Contractor Performance Assessment and Reporting System (CPARS) will be used for evaluation purposes. The Government's evaluation will include the CPARS standard reporting categories of: Quality, Schedule, Cost Control, Business Relations, Management, and Small Business Utilization.
k. The Contractor shall submit reports electronically to NASA unless prohibited. Persons on distribution shall be identified by NASA at a later date.
l. The Contractor shall submit a Quarterly Government Furnished Property (GFP) list (cumulative), as applicable, which includes tagged and non-tagged items.

3.0 STAFFING - LOCATION, TRAVEL, TRANSITION, AND WORK HOURS

The Contractor shall provide support staff at the NASA Glenn Research Center where programs and projects are administered. The Contractor may also provide support at other locations where placement of staff may lead to efficient performance of the contract, such as: a corporate office, in the vicinity of NASA Headquarters, and at or in the vicinity of other NASA Field Centers. The Government may require Contractor services provided to other organizations within the NASA Office of Education, or other NASA or Federal STEM installations. The Contractor shall be able to support such services, including those which require extended travel or permanent employment in the specified location. In general, however, the services will pertain to projects and programs administered through the NASA Glenn Research Center.

Travel to NASA Headquarters, NASA Field Centers, implementation sites, and NASA partner sites shall be required. Whenever possible, travel will be limited by collaborative technology.

The Contractor shall work with incumbent contractor staff to ensure seamless transitions as programs and tasks are integrated. No later than 90 calendar days from the commencement of the phase-in, the Contractor shall ensure that the initial staff is fully qualified and possesses any necessary certifications required for successful performance of the contract. For staff integrated into the contract at later dates, the Contractor shall ensure that the hired staff is fully qualified and possesses any necessary certifications within 60 calendar days of the transition date. The Contractor shall include this information as part of its Monthly Status Reports.

The Contractor shall provide all required services during Glenn Research Center's normal business hours of Monday through Friday with exception of Federal holidays. The Contractor shall provide required services which accommodate educational programs occurring during non-normal business hours (i.e. student competitions, community events, special exhibits) as specified in the issued tasks. These activities typically require some weekend and holiday hours. Flexible work schedules shall be utilized to avoid the use of overtime.

4.0 GOVERNMENT FURNISHED PROPERTY AND SERVICES

The Contractor shall provide all management, labor, supervision, material and equipment to successfully manage all contract activities with the exception of items provided as Government Furnished Property and Services. The Government intends to provide the on-site office space and office equipment currently being utilized by incumbent contractors, as it becomes available, for on-site personnel. The space and equipment shall be utilized only for the purposes of this contract. The Contractor shall provide any additional office space necessary to complete the efficient performance of this contract in an off-site location.

The Contractor shall order office supplies and materials through the Government, using the appropriate requisition forms routed through the Government for approval. For supplies the Contractor needs that are not available from the Government, the supplies shall be purchased by the Contractor only with the consent of the Contracting Officer or the Contracting Officer's Technical Representative and subject to clause 52.244-2 Subcontracts (Cost Reimbursement).

5.0 SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS

The Contractor shall ensure that all personnel, including sub-contracted personnel, comply with all Federal, State, local, NASA and GRC Safety, Health, and Environmental laws, regulations, requirements, policies, and guidelines when staffing and performing tasks. The Contractor shall also comply with any Safety, Health, and Environmental regulatory reporting and training requirements applicable to this contract. In addition, the contractor shall support NASA Glenn's Environmental Management System (EMS) efforts by participating and supporting the GRC in achieving and maintaining its ISO 14001 Certification.

6.0 CONTRACTOR EVALUATIONS

The Contractor shall be evaluated, at a minimum twice per year, by NASA's Office of Education at NASA Headquarters, as well as by, GRC EPO and UP. The Contractor's evaluation will include Recruitment & Retention (strategies, targeted groups, selection process, etc.) and Understanding of the STEM Crisis and Approach & the Contractor's innovative approaches to address it.

The Contractor's support of the NASA projects will be evaluated in accordance with the NASA Education Project Lifecycle (See Appendix F). This lifecycle includes external assessments conducted by NASA selected third party evaluators. These evaluations are conducted using industry standard data collection and analysis methodologies and approaches to conduct credible and objective measurement of the impact of education offerings. On an annual basis NASA collects data in the following ways:

6.01 OFFICE OF EDUCATION PERFORMANCE MEASUREMENT (OEPM)

The contractor shall:

a. Ensure that NASA projects require participants (including families) to complete a *"participants"* evaluation instrument at the end of each academic session, and each summer session using OEPM or in hard-copy form where computers may not be available.
b. Ensure that each NASA project enters its OEPM data after completion of each session.

With NASA approval, the contractor shall implement projects or take necessary actions to enhance and expand project based on evaluation results.

6.02 TRACKING OF PARTICIPANTS

The contractor shall work with NASA to develop processes and mechanisms to track participants in accordance with Agency and OMB policies and guidelines.

a. Describe their approach to implementing the projects. As part of this description address the approach to smoothly transitioning the current undergraduate students into the proposed project plans and also address the commencement of other significant aspects of the approach.
b. Describe their approach to public engagement and promotion and include details on specific opportunities and mechanisms to collaborate and partner, if any, with organizations that will be leveraged to ensure a diverse balance of scholar participants.
c. Outline a plan to work with project management in addressing internal and external evaluations and reviews.
d. Discuss its approach to continuous improvement that documents outcomes and demonstrates progress toward achieving the objectives of their proposed education activities.

APPENDIX A: SUMMARY OF CURRENT EDUCATIONALPROJECTS ADMINISTERED BY THE NASA GLENN RESEARCH CENTER

MOTIVATING UNDERGRADUATES IN SCIENCE AND TECHNOLOGY (MUST)
Type of Project: National
Description of Project: The MUST Project, managed by the National Aeronautics and Space Administration (NASA), supports the academic and professional development of undergraduates—through scholarships, mentorships, and internships—from backgrounds not typically represented in Science, Technology, Engineering, and Mathematics (STEM) career fields. Applicants must interface with the OSSI:SOLAR System. Four broad goals for the MUST Project have been outlined: 1. Develop STEM expertise leading to eventual degrees among groups that are currently underrepresented in the workforce, including women, minorities, persons with disabilities, and individuals from rural and low-income communities; 2. Provide support services such as mentoring to ensure that students successfully complete their coursework and encourage degree completion; 3. Provide hands-on research experiences that broaden interests in the aerospace industry; and 4. Prepare students for careers in STEM by engaging them in holistic professional development experiences.
Participation: In FY 2011, MUST provided support for 115 scholars.
Type of Grantee Support: Project coordination, technical direction, and support of day to day operations. Management of MUST project operations and administration of undergraduate student scholarships. Support for identifying and selecting scholars who completed their registration and application online through the NASA OSSI; Support for paying internship stipends, planning/executing of annual student symposium, and interacting with partnering entities; Support the operation, maintenance and evaluation of the project.
Expiration Date of Current Contractual Vehicle: December 31, 2014
URL: www.nasa.gov/education/must **URL: http://intern.nasa.gov**

NASA EXPLORER SCHOOLS (NES)
Type of Project: National
Description of Project: NES invests in STEM educators to inspire and engage future scientists, engineers and technicians that NASA needs to continue its journey. NES gives educators and students of grades 4-12 access to NASA's people, missions, research and facilities by providing a comprehensive set of free NASA classroom materials to help teach dozens of STEM concepts. Participation in NES gives free access to: Classroom Videos, Lessons, Professional Development, a Live Help Desk, Recognition/Best Practices, Live Video Tools, and Collaboration Tools.
Participation: In Fiscal Year (FY) 2011, NES reached over 1,700 teachers and 160,000 students in all 50 states, the District of Columbia and Puerto Rico. Estimated usage for FY 2012 is: 2,100 educators and 250,000 students.
Type of Contractor Support: Project coordination, technical direction, and support of day to day operations; Design and delivery of electronic teacher professional development, weekly online student content, and educator support through technology tools; Coordinate travel and logistics for student and teacher recognized events. Electronic modules include: self guided modules (10 scheduled for FY12); development of original 7 minute NASA Now episodes (41 scheduled for FY12); delivery of live orientation sessions (60 scheduled for FY12) utilizing collaborative software; and delivery of live 90-minute webinars (100 scheduled for FY12) utilizing collaborative software.
Expiration Date of Current Contractual Vehicle: July 31, 2012
URL: http://explorerschools.nasa.gov

SCIENCE ENGINEERING MATHEMATICS AND AEROSPACE ACADEMY (SEMAA)
Type of Project: National
Description of Project: SEMAA is a national, innovative project designed to increase participation and retention of historically underrepresented K-12 youth in STEM fields. SEMAA is located at community colleges; Historically Black Colleges and Universities, Hispanic Serving Institutions, Tribal Colleges and Universities, high schools, middle schools, elementary schools, and science centers/museums in urban and rural cities throughout the United States. Fifteen administration sites are located in fourteen states. The program leverages a network of partners (over 200) who contribute funds. SEMAA provides: Hands-on, Inquiry Based K-12 STEM Curriculum Enhancement Activities, an Aerospace Education Laboratory (AEL), and a Family Café (interactive forum at each SEMAA site which hosts various activities throughout the year) for parents/caregivers.
Participation: In FY 2011, SEMAA reached 61,963 participants. Of the total, 21,280 participants were students with a minimum participation of 21 hours, 9,471 were Family Café participants, 430 were educators and 30,782 were AEL outreach participants.
Type of Contractor Support: Project coordination, technical direction, and support of day to day operations; Management of SEMAA National Project Office and pass-through funds to SEMAA administration sites; Tracking participant data such as registration information, session attendance, re-enrollment; Responding to inquiries by EPO customers; Assisting in the development of Project timelines; Supporting the development of project plans; Producing reports as required by Project Manager; Working with Project Manager to develop and implement evaluative material.
Expiration Date of Current Contractual Vehicle: March 22, 2013
URL: www.nasa.gov/education/semaa

SUMMER OF INNOVATION (SoI)
Type of Project: National
Description of Project: SoI supports grade 4-9 student interest in STEM by strengthening the capacity of community and school-based organizations to deliver high quality STEM programming to underserved and underrepresented students through afterschool learning and in summer months. SoI leverages NASA funding, content, and brand association with proven school- and community-based summer and extended learning STEM organizations. SoI provides funding opportunities, curriculum support materials and educator professional development.
Participation: In FY 2011, SoI developed over 300 funded and unfunded collaborations to serve over 60,000 students and 5,000 educators.
Type of Contractor Support: Project coordination, technical direction, and support of day to day operations; Administration of 'mini-grants'; Develop and submit data collection strategies and instrument; Recommend evaluation and statistical analysis methodology; Assist Project Manager in the development and documentation of Project timelines and schedules; Work with Project Manager in the development and implementation of evaluative material; Evaluate project impact and effectiveness; Develop strategies, analytical models and methodologies for project management, execution, and evaluation; Interface with and support project partners, collaborators and stakeholders
Expiration Date of Current Contractual Vehicle: April 30, 2013
URL: http://www.nasa.gov/soi

FOR INSPIRATION AND RECOGNITION OF SCIENCE & TECHNOLOGY (FIRST) ROBOTICS COMPETITIONS
Type of Project: Regional
Description of Project: The FIRST Robotics Competitions are engineering and robotics competitions which combine the excitement of sport with the rigors of science and technology. Under strict rules, limited resources, and time limits, teams of 25 students or more are challenged to raise funds, design a team "brand," hone teamwork skills, and build and program robots to perform prescribed tasks against a field of competitors. Volunteer professional mentors lend their time and talents to guide teams.
Participation: Regional event serves over 1,400 students from the GRC Region
Type of Contractor Support: Event planning and support, coordination of event and volunteers, and disbursement of scholarships to participating schools.
Expiration Date of Current Contractual Vehicle: September 13, 2012
URL: www.nasa.gov/centers/glenn/education/index.html

LEWIS EDUCATIONAL RESEARCH & COLLABORATIVE INTERNSHIP PROJECT (LERCIP)
Type of Project: Center Unique – Higher Education
Description of Project: Lewis' Educational and Collaborative Internship Project (LERCIP) is a center unique college internship project conducted at the NASA Glenn Research Center. LERCIP is collaborative undertaking with the NASA Glenn Research Center and the Ohio Aerospace Institute (OAI). It provides a 10-week paid summer internship opportunities for students pursuing degrees in Science, Technology, Engineering, Science and Mathematics (STEM); and non-STEM majors that lend support to the NASA mission. Students spend the summer learning and working at the NASA Glenn Research Center facilities under the guidance of a mentor and engage in authentic NASA-related, mission-based R&D and career-related activities. The LERCIP educational component allows students to attend and participate in a variety of planned activities from orientation to professional development workshops to presenting at the culminating Student Research Symposium. LERCIP provides hands-on experiences that challenge, inspire, and promote practical application; complementing and expanding upon students' theoretical education. Applicants must interface with the OSSI:SOLAR System.
Participation: In FY 2011, LERCIP provided internship opportunities to 109 college students and 2 high school teachers.
Type of Contractor Support: Project coordination, application review and coordination of offers to students, GRC mentors, scheduling of summer events, salary and travel reimbursement, student follow-up and exit interview surveys. Support for identifying and selecting scholars who completed their registration and application online through the NASA OSSI. Also, responsible for tracking participant data such as school, academic level, major, and other relevant information needed to comply with the Agency and Office, such as OEPM.
Expiration Date of Current Contractual Vehicle: December 31, 2012
URL: http://www.nasa.gov/centers/glenn/education/LERCIP_GRC.html **URL:** intern.nasa.gov

LEWIS EDUCATIONAL AND RESEARCH COLLABORATIVE AND INTERNSHIP PROGRAM (LERCIP) TEACHER
Type of Project: Center Unique – Higher Education
Description of Project: LERCIP Teacher provides 10-week paid summer educational and research internships to teachers interested in expanding their STEM knowledge. The internship program provides secondary teachers the opportunity to work side by side with a GRC mentor and gain first-hand experience working at a premier NASA research facility. Applicants must interface with the OSSI:SOLAR System.
Participation: 1 – 2 teachers per year.
Type of Contractor Support: Project coordination, application review and coordination of offers to teachers, GRC mentors, scheduling of summer events, salary and travel reimbursement, teacher follow-up and exit interview surveys. Support for identifying and selecting teachers who completed their registration and application online through the NASA OSSI. Also, responsible for tracking participant data and other relevant information needed to comply with the Agency and Office, such as OEPM.
Expiration Date of Current Contractual Vehicle: December 31, 2012
URL: http://www.nasa.gov/centers/glenn/education/LERCIP_GRC.html **URL:** intern.nasa.gov

EXPLORING PROJECT
Type of Project: Local
Description of Project: Exploring is a worksite-based collaboration with the Boy Scouts of America program that is part of Learning for Life's career education program for young men and women who are 14 (and have completed the eighth grade) through 20 years old. STEM activity groups led by GRC volunteers, who serve as Exploring Advisors, meet one weekday evening a week from October through April to work on group projects in the areas, known as Explorer Posts, of aeronautics, computer technology, balloon satellite technology, and human space flight.
Participation: In FY 2011, the Explorer Post reached 62 students.
Type of Contractor Support: Project coordination support of day to day activities
Expiration Date of Current Contractual Vehicle: N/A
URL: www.nasa.gov/centers/glenn/education/index.html

SHADOWING PROJECT
Type of Project: Local
Description of Project: The High School Shadowing Project provides high school students with a GRC career exploration experience for 1 to 10 business days. Opportunities are available during the school year for students interested in STEM and professional administration.
Participation: In FY2011, GRC Shadowing Project reached 118 students on 4 pre-scheduled shadowing days.
Type of Contractor Support: Project coordination support of day to day activities
Expiration Date of Current Contractual Vehicle: N/A
URL: www.nasa.gov/centers/glenn/education/index.html

STEMsation! - AN INNOVATIVE FUSION OF NATIONAL ENGINEERS WEEK AND NATIONAL LAB DAY
Type of Project: Local
Description of Project: STEMsation focuses on students and teachers of grades 4-12 and provides a personal opportunity to explore STEM careers and build relationships with STEM subject matter experts. STEMsation consists of Exploration (presentations to students, Engagement (Research Projects for Educators and Students with subject matter expert support), and Research (Educators and Students design, research, and present projects with subject matter expert support).
Participation: In FY 2011: 5 schools; 9 educator participants; 2 districts represented; 74 student participants, 18 registered STEM advisors; 5 participating STEM Advisors
Type of Contractor Support: Project coordination support of day to day Activities
Expiration Date of Current Contractual Vehicle: N/A
URL: www.nasa.gov/centers/glenn/education/index.html

INTERDISCIPLINARY NATIONAL SCIENCE PROJECT INCORPORATING RESEARCH AND EDUCATION EXPERIENCE (INSPIRE)
Type of Project: Agency - Managed by NASA Kennedy Space Center
Description of Project: INSPIRE provides students from the 9th grade through the freshman year of college with on-line resources; NASA related activities and educational modules; and participation in video teleconferences with the centers. Activities include: a one-day Very Important Person (VIP) tour and workshop at a NASA Center (for 9th graders), a two-week collegiate experience at a participating college or university (for 10th graders), and an eight-week paid internship at a NASA Center (for 11th and 12th graders).
Participation: FY 2011: 21 high school participants participated in the Summer STEM experiences at GRC. **INSPIRE Pre-College Program:** 9 INSPIRE Pre-College (rising college freshman) participated in GRC internship. **INSPIRE Residential Program:** 7 INSPIRE Residential (rising high school seniors) participated in GRC internship. **INSPIRE/Explorer Experience VIP Visit:** GRC hosted 5 rising high school sophomores and their parents/guardians for a VIP day visit for the INSPIRE Explorer Experience Component.
Type of Contractor Support: Project coordination support of day to day Activities
Expiration Date of Current Contractual Vehicle: Grant/Cooperative Agreement, March 30, 2013
URL: www.nasa.gov/centers/glenn/education/index.html

FEB TUTORING
Type of Project: Local
Description of Project: The Cleveland Federal Executive Board Tutoring Program was started in 2006 by participants of the Cleveland Federal Community Leadership Institute (CFCLI) program in an effort to support the Cleveland Metropolitan School District (CMSD) who experienced difficult challenges. The program is managed by a multi agency team with current members from the Veterans Administration (VA), United States Postal Service (USPS), NASA Defense Finance and Accounting Services (DFAS) and Federal Bureau of Investigation (FBI). Students needing support in reading, math, social studies or science are paired with federal employees throughout the school year. The intent is to help shape the leaders of tomorrow and make a difference in a child's life and the future of Cleveland!
Participation: FY 12: 31 NASA civil servant employees tutored students in three Cleveland Metropolitan Elementary Schools-Clark, Wade Park and Memorial.
Type of Contractor Support: Project coordination support of day to day Activities
Expiration Date of Current Contractual Vehicle: N/A
URL: http://clevelandfeb.grc.nasa.gov/

SPECIAL PROJECTS
Type of Project: Regional
Description of Project: NASA GRC Special Projects establishes partnerships throughout the community to promote awareness of STEM education. Special Projects provides STEM engagement activities and hands-on opportunities to participants utilizing NASA content and NASA staff.
Participation: Varies per request
Type of Contractor Support: Project coordination support of day to day activities. Assist in the creation of activities for community outreach, and identify content required for hands-on student engagement, maintain/update listings of potential partners, track data such as the number of program attendees, assist in the creation of presentations, forms, project specific documents, establish and maintain electronic files and calendar of events. Make contact with outside entities, schedule and attend meetings and capture important criteria at all meetings. Attendance and support is required at special events/activities on lab and off-site. Coordinate with internal/external venues.
Expiration Date of Current Contractual Vehicle: N/A
URL: N/A

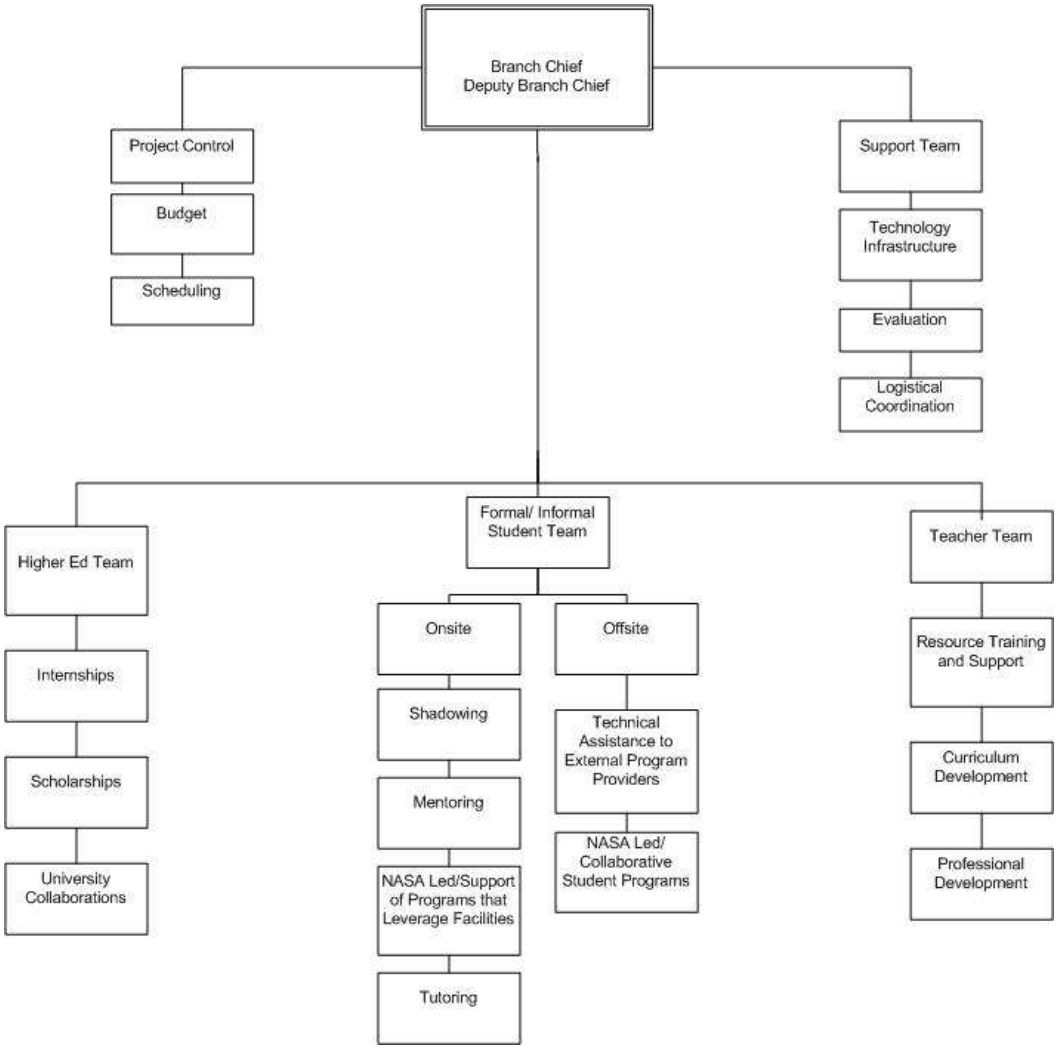
INFORMAL EDUCATION
Type of Project: National
Description of Project: NASA Informal Education seeks to enhance the capabilities of individuals and the informal education communities. It provides access to NASA staff, research, technology, information and facilities; offers professional development opportunities for informal science educators; and facilitates collaborative partnerships between the informal and formal education communities. The informal education communities include but are not limited to amateur astronomy groups, after-school programs, libraries, museums, science centers, planetariums, zoos, aquaria and community groups.
Participation: Varies per request
Type of Contractor Support: Project coordination support of day to day activities. Assist in the creation of activities for informal education communities, create listings of potential collaborators, track data such as participant attendance, enrollment of conference attendees, and establish and maintain electronic files.
Expiration Date of Current Contractual Vehicle: N/A
URL: http://www.nasa.gov/offices/education/contacts/informal.html

NASA SPACE AND AERONAUTICS ACADEMIES AT GLENN
Type of Project: National
Description of Project: The Space and Aeronautics Academies are national programs which are managed and implemented autonomously at the participating NASA Centers. Glenn has a Lead role in the NASA Aeronautics Academies. Both Academies at Glenn are managed by University Programs. The NASA Space Academy offers an immersive and integrated multidisciplinary exposure and training for college undergraduates and graduate students with various backgrounds and career aspirations of critical importance to the National Aerospace program. The academic curriculum balances opportunities for direct contact with advanced science and engineering research and technology, and an awareness of the complex managerial, political, financial, social, and human issues faced by the current and future aerospace programs. The NASA Space Academy is dedicated to promoting current and future opportunities for innovation and leadership in space- and aerospace-related careers. The NASA Aeronautics Academy is an opportunity for an immersive and integrated multidisciplinary exposure and training, for students with various backgrounds and career aspirations of critical importance to the National Aeronautics and related disciplines program. The goal is to prepare the requisite workforce of young professionals for employment in Aeronautics careers. The Aeronautics Academy research associates (RAs) receive training in integrated systems research, project management, leadership, teamwork and multidisciplinary collaboration. The RAs work as groups of teams on multi-faceted problems guided by professional scientists and engineers. Lectures, seminars, professional activities, GRC facility tours, as well as, visits to selected NASA Centers and NASA industry partners enrich the internship experience for the participants of the Academies. Applicants must interface with the OSSI:SOLAR System.
Participation: The typical number of student participants in each of the Academies at Glenn averages10. The academic levels of the STEM major participants range from Rising Junior to Rising Second Year in graduate study. Each Academy has participants from a wide range of states within the continental US and often Puerto Rico. The academic disciplines are typically Engineering and science majors.
Type of Contractor Support: Provide program activity support through event planning and logistics. Enhance program through professional development of participants. Financial administration to expedite program execution/implementation.
Expiration Date of Current Contractual Vehicle: December 31, 2012
URL: https://rt.grc.nasa.gov/university-affairs/ **URL:** http://intern.nasa.gov

NASA GLENN FACULTY FELLOWSHIP PROGRAM (NGFFP)
Type of Project: National
Description of Project: GRC University Programs manages the ten-week summer NASA Glenn Faculty Fellowship. The NGFFP is open primarily to US citizens who are full-time STEM faculty members at accredited US universities and colleges. The Aeronautics and Space Research and Technology Fellowship provides faculty opportunities to: 1. Enhance their professional knowledge by performing relevant and high cutting-edge research at GRC; 2. Stimulate exchange of ideas between faculty and employees of NASA GRC; 3. Enrich and refresh the research and teaching at US academic institutions through infusion of NASA mission-related research and technology content into classroom teaching; and 4. Contribute to the research, technology and engineering work packages and objectives of GRC. Fellows work on projects to complement in-house efforts by their GRC professional colleagues. Research, technology and engineering engagements include areas such as Advanced Energy, Advanced Microwave Communications, Aeronautical and Space Systems Analysis, Electric (Ion) Propulsion, Computational Fluid Dynamics, Materials and Structures, Propulsion Systems Aerodynamics, Space Power Generation, Microgravity Fluids Physics and Bioengineering. The research work is complemented with lectures, seminars and other professional activities, as well as, GRC facility tours. Applicants must interface with the OSSI:SOLAR System.
Participation: Intake of STEM faculty fellows has ranged between 15 and 35 in the past five years. At any given year of offering, the program attracts faculty from various colleges and universities across the continental US and Puerto Rico.
Type of Contractor Support: Provide program activity support through event planning and logistics. Enhance program through professional development of participants. Financial administration to expedite program execution/implementation.
Expiration Date of Current Contractual Vehicle: December 31, 2012
URL: https://rt.grc.nasa.gov/university-affairs/ngffp/ **URL:** http://intern.nasa.gov

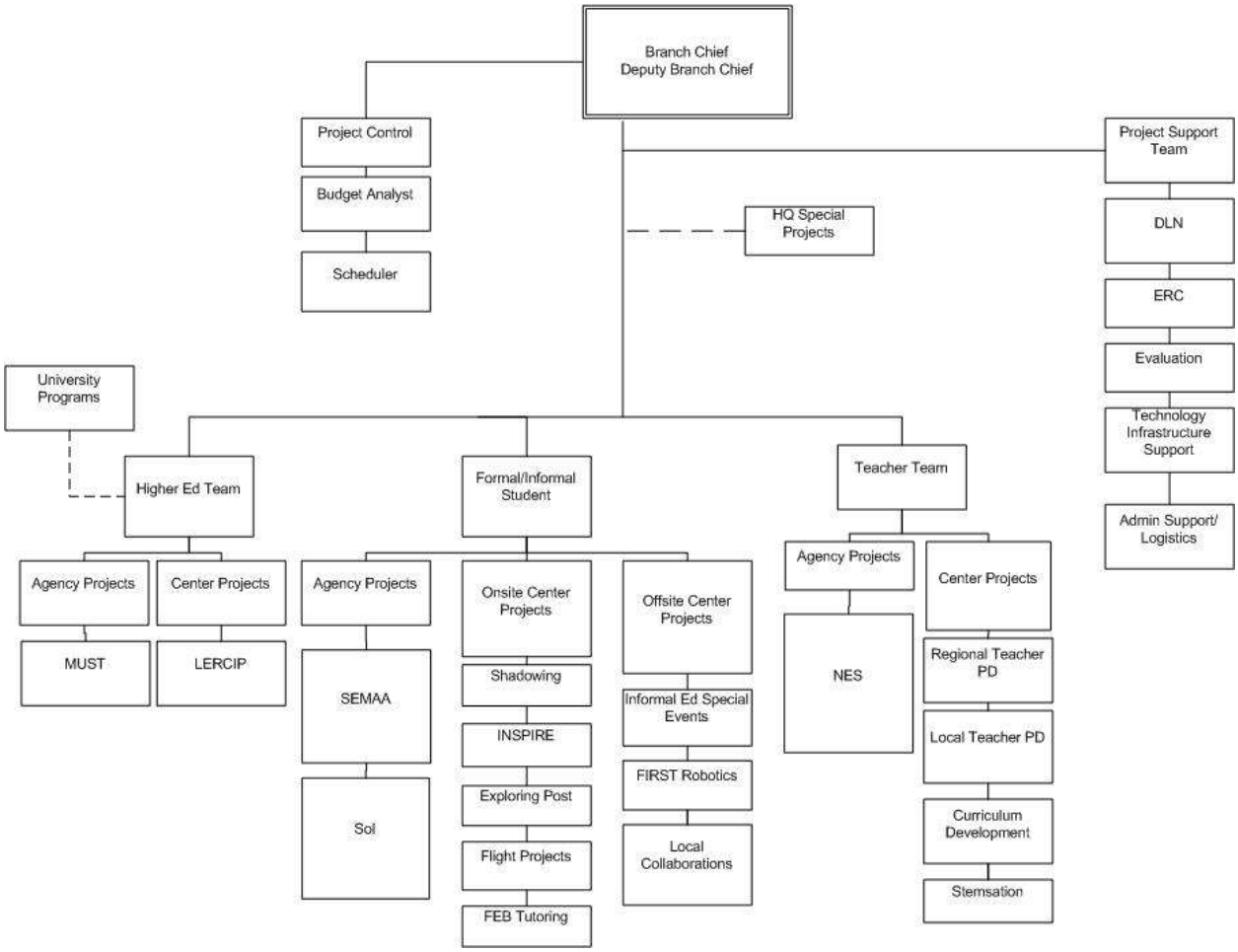
APPENDIX B: ORGANIZATIONAL STRUCTURE OF THE NASA GLENN RESEARCH CENTER EDUCATIONAL PROGRAM OFFICE

Educational Program Office
Functional Organization Chart



APPENDIX C: PROJECT MANAGEMENT ORGANIZATIONAL CHART OF THE NASA GLENN RESEARCH CENTER EDUCATIONAL PROGRAM OFFICE

Educational Program Office
Project Management Organizational Chart



APPENDIX D: LIST OF ACRONYMS

ACES	Agency Consolidated End User Services
AEL	Aerospace Education Laboratory
Agency	National Aeronautics and Space Administration (NASA)
APG	Annual Performance Goals
BHALF	BalloonSAT – High Altitude Flight
BMS	Business Management System
Center	NASA Glenn Research Center
CCB	Change Control Board
CCC	Cuyahoga Community College
CFCLI	Cleveland Federal Community Leadership Institute
CMR	Communication Material Review
CMSD	Cleveland Metropolitan School District
CO	Contracting Officer
COTR	Contracting Officer's Technical Representative
CR	Change Request
DFAS	Defense Finance and Accounting Services
DLN	Digital Learning Network
EMS	Environmental Management System
EPO	Educational Programs Office
EPTSCR	Experimental Program to Stimulate Competitive Research
ERC	Educator Resource Center
ERCN	Educator Resource Center Network
FBI	Federal Bureau of Investigation
FEB	Federal Executive Board
FIRST	For Inspiration and Recognition of Science & Technology
FY	Fiscal Year
GFP	Government Furnished Property
GPA	Grade Point Average
GRC	NASA Glenn Research Center
GSRP	Graduate Student Researchers Project
HBCU	Historically Black Colleges and Universities
HSI	Hispanic Serving Institutions
INSPIRE	Interdisciplinary National Science Project Incorporating Research and Education Experience
ISO	International Organization for Standardization
IT	Information technology
K-12	Kindergarten through 12th grade
LERCIP	Lewis Educational and Research Collaborative and Internship Program
MS	Microsoft
MUREP	Minority University Research and Education Program
MUST	Motivating Undergraduates in Science and Technology
NASA	National Aeronautics and Space Administration
NASA HQ	NASA Headquarters

NES	NASA Explorer Schools
NIFS	NASA Internships, Fellowships, and Scholarships
NSGCFP	National Space Grant College and Fellowship Program
NEW	National Engineers Week
NLD	National Lab Day
NSO	National SEMAA Office
OEPM	Office of Education Performance Management
OMB	Office of Management and Budget
OSSI	One Stop Shopping Initiative
PC	Project Coordinator
PD	Professional Development
PM	Project Manager
POC	Point of Contact
RERC	Regional Educator Resource Center
RLS	Resource Loaded Schedule
SEMAA	Science, Engineering, Mathematics and Aerospace Academy
Six-State Region	Ohio, Indiana, Illinois, Michigan, Minnesota and Wisconsin
SME	Subject matter expert
SoI	Summer of Innovation
SOLAR	Student On-Line Application for Recruiting
SOP	Standard Operating Plan
SOW	Statement of Work
STEM	Science, technology, engineering and mathematics
TCU	Tribal Colleges and Universities
TR	Technical Representative
UP	University Programs
USPS	United States Postal Service
USRP	Undergraduate Student Research Project
VA	Veterans Administration
VIP	Very Important Person
ViTS	Video Teleconferencing System
WAR	Weekly Activity Report
WWW	World Wide Web

APPENDIX E: TERMS AND DEFINITIONS

A

Activity
An educational process or procedure intended to stimulate learning through actual experience.

C

Curriculum Support Materials
The identification of the required subjects and topics that are critical for a given grade or age. NASA's curriculum support materials focus on those disciplines it employs to successfully complete missions and make advances in STEM disciplines. NASA's curricular resources are developed to national standards, peer reviewed and tested in classrooms before being released.

E

Evaluation
The process used to provide independent assessments of the continuing ability of the program/ project to meet its technical and programmatic commitments. Evaluation also provides value-added assistance to the program/project managers.

Educator Professional Development
Professional development, usually through practical application, for persons currently employed as educators in both formal and informal settings. This is a broader term, inclusive of teacher professional development, and the work NASA does to increase the technical skills of informal educators. NASA infuses its content into these development opportunities to provide educators with the knowledge necessary to successfully teach a STEM subject.

Extended Learning Activities
Extended Learning Activities are STEM educational activities supplemental to the SEMAA curriculum and may include enrichment activities, such as field trips, guest speakers, interaction and/or mentoring with STEM professionals, near-peer support groups for mentoring and tutoring, math and science fairs, STEM competitions, and engineering design challenges.

F

Fellowships
Competitively awarded fellowships are offered to support independently conceived and designed research by highly qualified graduate and post-graduate students in disciplines needed to help advance NASA's missions.

Formal Education
Programs intended to provide support for or to strengthen education at the elementary and secondary through postgraduate levels, including adult education.

H

Higher Education
Includes Internship, Fellowship and Scholarship components of NASA Education, open to students pursuing STEM majors at accredited mainly US universities, colleges and community colleges, as well as, STEM faculty in similar institutions.

I

Informal Education
Informal education activities are those with the intent to provide voluntary, self-directed opportunities for individuals who are motivated by personal needs and interests. This type of education takes place outside the established formal education pipeline.

Internships
Competitively awarded positions that provide research or engineering opportunities for high school and undergraduate students in which they gain real-world experience contributing to the operation of a NASA Center or the advancement of NASA's missions.

Implementation
To put in place the necessary resources and take action to perform a program or project. Implementation Plans are developed with clear requirements and traceability to the Agency Strategic Plan in order to verify compliance to the plan, define the baseline from which monitoring and evaluation will occur, and to enable the development of performance reporting to external stakeholders.

M

Museum Alliance
The Museum Alliance is a community of practice comprised of informal science educators at museums, science centers, planetariums, observatories, zoos, aquariums, parks and nature centers who wish to incorporate NASA's activities and materials into their exhibits and visitor programs. It is intended to bring current NASA science and technology to visitors through professional development of staff and provision of materials such as visualizations, access to NASA experts, educational materials, etc.

Mission
The core function(s) and primary job(s) of the Agency.

Metric
The various parameters or features of a process that are measured. A standard of measurement.

N

NASA Education Community
Includes all personnel involved in formal and informal NASA Education activities including Speaker's Bureau events, science fair judging, mentoring, etc.

NASA Education
At NASA, the formal and informal education programs and the people who support them. The term "NASA Education" includes more than the people and programs of the Agency's Office of Education; it includes the people and efforts of NASA's mission organizations and Centers, and as such, represents the Agency's entire educational portfolio.

O

Office of Education
The Office of Education (OE) manages NASA's education budget and administers national education programs that draws on content from across the Agency. The Office provides the leadership for setting Agency education goals, coordinating and integrating NASA's education framework, implementation approach and policies. The Office of Education is responsible for ensuring compliance with external requirements, laws and NASA-wide processes, procedures and standards related to the education budget. The Office solicits external advice on matters pertaining to education and represents the Agency externally, especially in interactions with Congress, the Administration and other federal agencies.

Office of Education Performance Management (OEPM)
OEPM is the official system for capturing performance data on NASA education programs. OEPM is a centralized collection point, with a common set of data definitions and standardized data collection instruments. OEPM links performance data to performance measures, objectives, and outcomes. Project Managers are required to collect performance data using OEPM and ensure funded partners collect and input performance data into OEPM, as appropriate.

One Stop Shopping Initiative (OSSI): Student On-Line Application for Recruiting (SOLAR)
OSSI:SOLAR is the NASA Agency-wide integrated online application and selection system for student engagement in STEM research, aerospace education and the space exploration workforce pipeline. OSSI is a one point of entry system for the recruitment, application, selection and career development of undergraduate and graduate students, primarily in STEM disciplines, for all NASA internship, fellowship, and scholarship opportunities.

Outreach
Activities intended to raise awareness of, or interest in, NASA, its goals, missions and/or programs, and developing an appreciation for and exposure to science, technology, research and exploration.

Outcome
Result of a program effort (what happened as a result of the program) compared to its intended purpose.

P

Program
A strategic investment by a Mission Directorate or Mission Support office that has defined goals, objectives, architecture, a funding level and a management structure that supports one or more projects.

Project
A specific investment identified in a program plan having defined goals, objectives, requirements, life-cycle costs, a beginning and an end. A project yields new or revised products or services that directly address NASA's strategic needs. They may be performed wholly in-house; by government, industry or academic partnerships; or through contracts with private industry.

Program Assessment
A determination, through objective measurement and systematic analysis, of the manner and extent to which federal programs achieve intended objectives.

Portfolio
A collection of investments and strategies, such as research development, managed to further a common goal or goals.

S

STEM
The disciplines of science, technology, engineering and mathematics.

STEM Content Development
Creation of education content that includes science, technology, engineering, and mathematics material and knowledge from NASA's missions. NASA's STEM content supports informal and formal educators by providing them information that can be used as part of an activity or lesson that may fill a curriculum requirement.

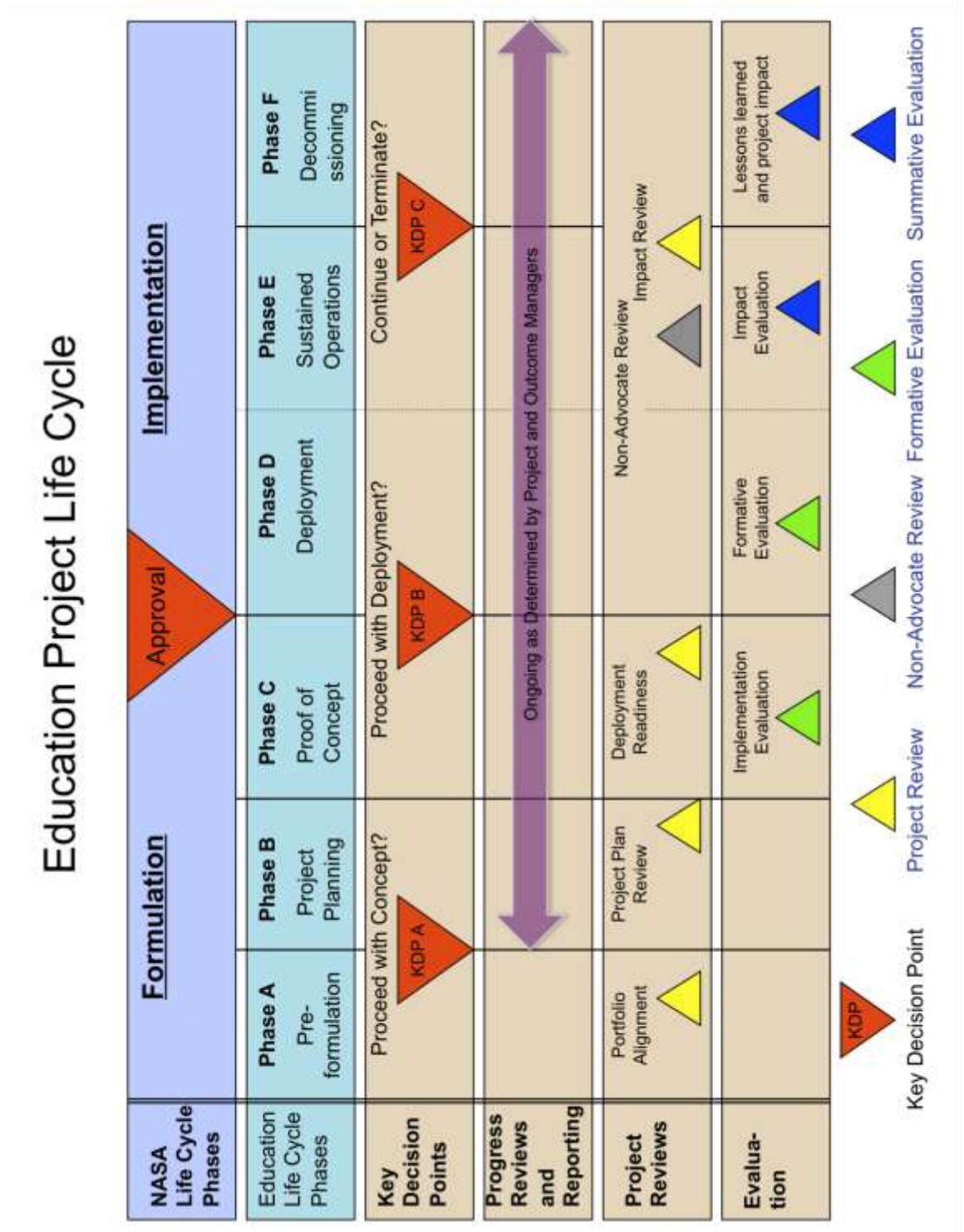
Student Experiential Activities
Hands-on learning activities occurring in formal and informal settings that engage and inspire learners of all ages while advancing NASA's goals in STEM education.

U

Underserved Communities
Often used interchangeably with "underrepresented," particularly as it relates to the sciences and engineering. Specifically, it is used to promote access and opportunity to persons of diverse backgrounds—racial, ethnic, gender, religious, age, sexual orientation, disabled, and other populations with limited access—to decent and affordable housing, gainful employment, and other services. In the STEM area, "underserved" has typically referred to women and persons with disabilities.

Underrepresented Communities
Refers to persons from racial and ethnic groups whose enrollment in STEM education or participation in STEM professions is much smaller than that group's representation in the general population. African Americans, Hispanics/ Latinos, and Native Americans and Pacific Islanders currently fit this definition.

APPENDIX F: NASA Education Project Life Cycle



APPENDIX G: SAMPLE TASKS AND SCENARIOS

SAMPLE TASK 1.0 - EDUCATIONAL PROGRAMS OFFICE BASELINE SUPPORT

1.1 –Project Coordinators Support

A. General Requirements – The contractor shall provide program and project support in accordance with all Agency and Center policies and directives.

B. Description of Work - The contractor shall provide support to the Educational Programs Office (EPO) by serving as a Project Coordinator, providing implementation support for Agency-level and Center-unique programs/projects.

This position is administratively located in the EPO. The worksite may be at NASA GRC or in the Office of Education at NASA Headquarters; this position may require significant travel. The position will require operational interface with the Center and Agency Education Leadership including EPO Chief, Deputy Chief, EPO project managers, team leads, team members, Agency program/portfolio managers, NASA Glenn scientists and engineers, students, parents, STEM collaborators and stakeholders, and various educational partner i.e., administrators, teachers and educators.

1.1.1 The Contractor shall:

Provide a wide range of management, technical advice, guidance and support to NASA's Education Leadership as follows:

a. Respond to inquiries by EPO customers with information about K-12, Higher Education, and Informal programs. K-12 Formal/Informal Projects include but are not limited to: Exploring, INSPIRE, CCC-SEMAA, and Shadowing. Higher Education Projects include but are not limited to: Experimental Program to Stimulate Competitive Research (EPSCoR), Graduate Student Researchers Project (GSRP), National Space Grant College and Fellowship Program (NSGCFP), The Undergraduate Student Research Project (USRP), Minority University Research and Education Program (MUREP), University Research Centers, and Motivating Undergraduates in Science and Technology (MUST). (see appendix C). For additional information on Projects and Programs visit the EPO website at: http://education.grc.nasa.gov
b. Assist Project Manager(s) in the development of Project timelines.
c. Support the development of project plans that include establishing and measuring milestones and metrics for determining the ongoing status of the project.
d. Provide services for the development and documentation of a high-level milestone schedule and lower-level detailed schedules for the EPO Projects.
e. Coordinate the development, distribution, receipt, and review of applications.

f. Coordinate and engage in the pre-screening, data verification, rating and interview/selection process.
g. Provide support in relaying NASA educational opportunities to students participating in current EPO projects or other approved student events and assist with student processing for projects supported.
h. Develop, implement, coordinate student program schedules (e.g., orientation, site visits, workshops, and banquets) and other events, and ensure deadlines are met, and that conflicts with other projects are identified and resolved. Will work with EPO Logistic Support person to complete these tasks.
i. Attend and support the planning and execution of kick-off/planning meetings as well as, site visits, recognition ceremonies, conferences and other project related meetings.
j. Establish and maintain a records management system which includes an action log for project task assignments. Work with Project Manager(s) to ensure a clear understanding of what is needed for each project and ensure tasks are completed by the established deadline dates.
k. Generate EPO reports weekly, bi-weekly, monthly, quarterly and annually as required by Project Manager(s) in accordance with Center and Agency governance requirements.
l. Work with Project Manager in the development and implementation of any evaluative material as it relates to the various projects supported.
m. Monitor project assessment and evaluation. Evaluate project impact and effectiveness and advise project manager of potential project requirements and make recommendations for project enhancements.
n. Work with Project Manager in the development and implementation of any project messaging materials (talking points, presentations, display boards, reports) related to projects being worked.
o. Work with appropriate administrative personnel to ensure proper badging clearances are taken care of for projects worked.
p. Coordinate interviews, field trips, and guest speakers. Identifies and obtains necessary program resources including logistical concerns and security.
q. Assist with recruitment efforts for project(s) supported.
r. Advise Project Manager of any issues or concerns so they can be effectively handled in a timely manner.
s. Develop and maintain relationships with EPO and Agency customers.
t. Manage the planning, design, implementation and updating of Project Website. Ensure compliancy with NASA IT requirements and Privacy Act/Paperwork Reduction Act requirements.

1.1.2. Quality Standards – The contractor shall perform all work accurately.

1.1.3. Schedule - The contractor shall meet the schedules agreed to with the TR.

1.1.4. Documentation – The contractor shall maintain files and databases available for review by the TR. Additional reports may be required.

1.2 –Senior Project Coordinators Support

A. General Requirements – The contractor shall provide program and project support in accordance with all Agency and Center policies and directives.

B. Description of Work - The contractor shall provide support to the Educational Programs Office (EPO) by serving as a Senior Project Coordinator, providing management and operations support for Agency-level and Center-unique programs/projects managed in the Office of Education at NASA HQ and in EPO.

This position is administratively located in the EPO. The worksite may be at NASA GRC or in the Office of Education at NASA Headquarters; this position may require significant travel. The position will require operational interface with the Center and Agency Education Leadership including EPO Chief, Deputy Chief, EPO project managers, team leads, team members, Agency program/portfolio managers, NASA Glenn scientists and engineers, students, parents, STEM collaborators and stakeholders, and various educational partner i.e., administrators, teachers and educators.

1.2.1. The Contractor shall:

Provide a wide range of management, administrative and technical advice, guidance, and support to NASA's Education Leadership as follows:

a. Provide project management and design support for the planning and implementation of innovative, mission-enabling, new NASA-wide initiatives.
b. Serve as a technical resource and/or senior advisor to the EPO Agency-level and Center-unique project managers.
c. Coordinate participation and collaborative efforts with all Agency projects managed and administered by the EPO.
d. Assist Project Manager(s) in the development of Project timelines.
e. Support the development of project plans that include establishing and measuring milestones and metrics for determining the ongoing status of the project.
f. Provide development, implementation and evaluation guidance and leadership on programs/projects and activities in the areas of formal and informal education.
g. Support the dissemination, review and analysis of program data.
h. Develop strategies, analytical models, and methodologies for project management and execution.
i. Develop strategies, analytical models and methodologies for evaluation.
j. Provide assistance and advice on partnership and collaboration development.
k. Work with project grantees/awardees, customers, partners, collaborators and stakeholders on the coordination and implementation of Agency and Center-level STEM education programs/projects.

l. Assist with the design, documentation and evaluation of mission-specific and/or centralized formal and informal education development partnerships and collaborations.
m. Assist with the evaluation of proposals submitted by organizations in support of NASA's STEM Education goals and objectives.
n. Recommend continuous improvement strategies/processes for program/project implementation, data collection/evaluation and reporting.
o. Use Center and Agency best practices to track projects adherence to established annual performance goals.
p. Develop and implement follow-up procedures to receive feedback from project participants' coordinators to ensure that project goals have been achieved, and that projects are functioning at optimal levels.
q. Serve as STEM, education and project management subject matter expert (SME) representing the Center and Agency education office(s) at meetings, workshops and training sessions.
r. Prepare and deliver presentations to Center and Agency-wide customers, stakeholders and the general public.

1.2.2. Quality Standards – The contractor shall perform all work accurately.

1.2.3. Schedule - The contractor shall meet the schedules agreed to with the Technical Representative (TR).

1.2.4. Documentation – The contractor shall maintain files and databases available for review by the TR. Additional reports may be required.

1.3 - Content Specialists Support

A. General Requirements – The contractor shall provide program and project support in accordance with all Agency and Center policies and directives.

B. Description of Work - The contractor shall provide support to the Educational Programs Office (EPO) by serving as a Content Specialists, providing management and operations support for Agency-level and Center-unique programs/projects managed in the Office of Education at NASA HQ and in EPO.

This position is administratively located in the EPO. The worksite may be at NASA GRC or in the Office of Education at NASA Headquarters; this position may require significant travel. The position will require operational interface with the Center and Agency Education Leadership including EPO Chief, Deputy Chief, EPO project managers, team leads, team members, Agency program/portfolio managers, NASA Glenn scientists and engineers, students, parents, STEM collaborators and stakeholders, and various educational partner i.e., administrators, teachers and educators.

NASA Education makes direct use of NASA content, people, or facilities to involve students and educators in NASA science, technology, engineering, and mathematics (STEM). NASA Content Specialists provide educational expertise in the design, development and delivery of curriculum, support materials and professional development to formal and informal education communities.

Content Specialists provides professional development, training and support to a variety of audiences through single and multi-day workshops and conferences, collaborative technology and the scaffolding and demonstration of research based effective practice in the delivery of STEM content to students. Content specialists also design and develop educational materials that use NASA content as a context for student learning and engagement.

1.3.1. The Contractor shall:

a. Provide professional development workshops both on and off-site and utilizing collaborative technologies and distance learning where appropriate to support educators in the use of NASA content to address local academic needs
b. Conduct local assessments and external discussions with customers to customize NASA resources and opportunities to align with local instructional goals and standards
c. Design and develop curriculum guides, lesson plans and multimedia content for students and educators
d. Design and deliver student presentations or programming to inspire and engage students in STEM content
e. Recommend new content and professional development strategies to project management based upon new research and trends in education

1.3.2. Quality Standards – The contractor shall perform all work accurately.

1.3.3. Schedule - The contractor shall meet the schedules agreed to with the Technical Representative (TR).

1.3.4. Documentation – The contractor shall maintain files and databases available for review by the TR. Additional reports may be required.

1.4–Technology Coordinators Support

A. General Requirements – The contractor shall provide program and project support in accordance with all Agency and Center policies and directives.
B. Description of Work - The contractor shall provide support to the Educational Programs Office (EPO) by serving as a Technology Coordinator, providing management and operations support for Agency-level and Center-unique programs/projects managed in the Office of Education at NASA HQ and in EPO.

This position is administratively located in the EPO. The worksite may be at NASA GRC or in the Office of Education at NASA Headquarters; this position may require significant travel. The position will require operational interface with the Center and Agency Education Leadership including EPO Chief, Deputy Chief, EPO project managers, team leads, team members, Agency program/portfolio managers, NASA Glenn scientists and engineers, students, parents, STEM collaborators and stakeholders, and various educational partner i.e., administrators, teachers and educators.

The Educational Programs Office uses multimedia, web interfaces, immersive environments, social networking and collaborative technologies to provide content and programming to students and teachers. NASA Education uses a variety of proven and emerging platforms to engage the public in educational and motivational content.

1.4.1. The Contractor shall:

a. Develop and oversee use of communication platforms to engage students, educators and public
b. Serve as a liaison and interface to Agency provided web contractors as necessary in the development of new efforts
c. Design, develop and maintain web-based instructional content and web interfaces for students and educators
d. Support content specialists in the design and delivery of effective instructor led and self-guided sessions delivered through collaborative software
e. Support project staff and external collaborators in the use of collaborative technology and other virtual tools to engage external audiences
f. Provide training and support to external customers in the use of NASA technology
g. Support the tracking of project status and evaluation data in technology tools
h. Investigate and recommend emerging technologies for inclusion into NASA programs
i. Stay current on NASA Glenn and Agency IT policies (508 compliance, Privacy Information Act guidelines) and ensure compliance of Education technology interfaces
j. Assess and evaluate existing hardware, software, and curriculum enhancement activities and recommend upgrades

1.4.2. Quality Standards – The contractor shall perform all work accurately.

1.4.3. Schedule - The contractor shall meet the schedules agreed to with the Technical Representative (TR).

1.4.4. Documentation – The contractor shall maintain files and databases available for review by the TR. Additional reports may be required.

SAMPLE TASK 2.0 – Science, Engineering, Mathematics and Aerospace Academy (SEMAA) Support

The NASA Science, Engineering, Mathematics and Aerospace Academy (SEMAA) project was established in 1993, as a joint venture between the NASA Glenn Research Center (GRC) and Cuyahoga Community College (CCC). Since then, the NASA SEMAA project has grown from a single site to a nationally renowned leader in the efforts to increase the participation of historically underserved K-12 youth in the areas of Science Technology Engineering and Mathematics (STEM).

The goals of the NASA SEMAA project are to inspire a more diverse population of students to pursue careers in STEM, engage students, teachers and families by incorporating emerging technologies into the project, and provide a challenging curriculum that meets national math, science and technology standards aligned to NASA's mission directorates. The NASA SEMAA project proactively addresses these goals by delivering hands-on, minds-on curriculum enhancement activities, a state-of-the-art Aerospace Education Laboratory (AEL) and an innovative Family Café (see below).

Due to the success of the NASA SEMAA project in Cleveland, beginning in 1998, the NASA SEMAA project was replicated across the United States. In order to manage and coordinate the growing NASA SEMAA project, a National SEMAA Office (NSO) was established. By the end of 1999, the project had been replicated in nine US cities; at the end of calendar year 2010, there were sixteen sites across the US.

The Educational Projects Office at NASA Glenn manages the NASA SEMAA project, and the NSO, managed by the contractor, administers the day-to-day operations of the project. Each NASA SEMAA Site has a sub-contract agreement with the NSO, and each site is contractually obligated to meet the requirements of the contract as well as adhere to NASA's Education Operating Principles. The NSO assists NASA in the coordination of the NASA SEMAA project nationwide.

Additionally, there are active Outreach AELs (not co-located with a NASA SEMAA site) that the NSO will be required to monitor.

As appropriate, NASA will furnish the NSO with work statements for new tasks related to the operation, and sustainability of the NASA SEMAA project; in return, the contractor shall furnish NASA a proposal detailing how each task will be implemented along with a detailed budget.
Ownership of all materials and equipment will be addressed in each task order issued.

NASA's Educational Programs Office at NASA Glenn will be responsible for the development of all NASA SEMAA Curriculum Enhancement Activities—this includes software for the AEL as well as interactive simulations. The contractor will be required to assist NASA with the beta testing of the activities/software, dissemination to the NASA SEMAA sites and will be required to conduct the relevant training.

Requirements:

The contractor shall manage the NSO and assist NASA in the coordination of the NASA SEMAA project nationwide by performing the following tasks:

Subtask 1 – Serve as the National SEMAA Office (NSO)

For the purpose of this solicitation, the role of the NSO shall consist of monitoring the NASA SEMAA and stand-alone AEL Sites, and managing the NSO. The responsibilities associated with each effort are described below:

1a. Monitor the NASA SEMAA Sites

The contractor shall issue subcontracts to NASA SEMAA sites. The contractor shall be responsible for overseeing the management of the NASA SEMAA sites as well as coordinating the activities of the sites.

Site Operations

NASA will furnish the contractor the amount of funds to allocate to each site. Based on NASA funding, each NASA SEMAA site is to serve a predetermined number of students. Historically, each site has been encouraged to serve a minimum of 625 students per year. Sites are also required to generate adequate funding to enhance and sustain their operations beyond NASA funding.

The students who participate in the SEMAA project should represent, but shall not be limited to, the target groups from the historically underrepresented and underserved groups in the fields of science, technology, engineering, and mathematics (STEM). Recruitment strategies shall be developed and implemented to ensure an adequate pool of applicants from the target groups and to encourage reaching the required number of students per year per site.

SEMAA Sessions

The contractor shall ensure that each NASA SEMAA site conduct an Academic Project during the fall, winter and spring and a Summer Project.

Family Café

Parental involvement is an essential element of the NASA SEMAA project; thus, activities to engage families and other adult family members or adult caregivers are mandatory. The contractor shall ensure that each NASA SEMAA site implement the NASA SEMAA Family Café component by design. The activities of the Family Café are carefully planned and typically focus on information and resources (e.g., testing, learning techniques, educational materials) designed to impart skills that families can use to develop and support their children's academic interests and success in science and mathematics.

Site Visits
The contractor shall visit each SEMAA site at least one time each year to ensure all aspects of the project are being met. Scheduling of site visit will be made in coordination with NASA and the host site.

The contractor shall provide a written summary report of the site visit to NASA and the host site not more than two (2) weeks after the site visit. This report shall include feedback from the contractor and host site in regards to project successes, issues and concerns, specific needs, recommendations and other aspects necessary to ensure the success of the project at the local level.

Project Recognition
The contractor shall work with the NASA SEMAA sites to develop a plan (guidelines/minimum requirements) for a recognition/awards project. The contractor shall:
Obtain NASA's approval for the plan.
Ensure that the guidelines are being implemented at the NASA SEMAA sites.
Conduct recognition at the Annual NASA SEMAA Director's Meeting.
Assist each NASA SEMAA site in the planning of local recognition program and other major events. Ensure that key personnel from NASA and the NSO are invited to participate in these programs.
Provide guidance to each NASA SEMAA site in publicizing the program to ensure that all press releases, brochures, new articles, reports or any type of media event follows NASA's public relations protocol.

Extended Learning Activities
The contractor shall work with the NASA SEMAA sites to ensure that they have a plan to monitor and report on the Extended Learning Activities that the NASA SEMAA students participate in. Extended Learning Activities are STEM educational activities supplemental to the SEMAA curriculum and may include enrichment activities, such as field trips, guest speakers, interaction and/or mentoring with STEM professionals, near-peer support groups for mentoring and tutoring, math and science fairs, STEM competitions, and engineering design challenges.
The contractor shall work with NASA to develop a template for the Extended Learning Activities plan. The Extended Learning Activities plan shall be incorporated into the sites Standard Operating Plan (SOP).

Outreach
The contractor shall work with the NASA SEMAA sites to ensure that they have a plan to monitor and report Outreach activities that are conducted by the NASA SEMAA sites. Outreach consists of using NASA SEMAA Curriculum Enhancement Activities and/or the AEL during non-NASA SEMAA sessions for school groups, community groups, professional organizations and others. The contractor shall work with NASA to develop a template for the Outreach plan. The Outreach plan shall be incorporated into the sites Standard Operating Plan (SOP).

Communication
The contractor shall work with the NASA to understand the Communications Material Review (CMR) process which provides guidelines on the use of the NASA Insignia and coordinates overall messages and strategies that are communicated to both internal and external stakeholders.

The contractor shall serve in a consulting and/or advisory capacity for NASA SEMAA sites by educating them on the communication guidelines set forth by the CMR process and ensuring these guidelines are implemented by the sites.

The contractor shall serve in a consulting and/or advisory capacity for NASA SEMAA sites by telephone or e-mail and shall respond to each site in a timely manner.

The contractor shall host monthly teleconferences with the NASA SEMAA sites for the purposes of providing educational updates and allowing the sites to provide project updates.

The contractor shall include NASA's participation in a monthly teleconference to ensure that NASA updates and related information are adequately communicated to the sites.

The contractor shall notify NASA of significant issues regarding the NASA SEMAA project via written correspondence. (E-mail is acceptable.) The contractor shall follow-up on action items from NASA or the sites, within ten days of request. The contractor shall work with NASA to develop templates that the NASA SEMAA sites will use to report the results of their outreach activities. Additionally, the contractor shall develop a mechanism to capture NASA SEMAA site events, highlights and news articles on an on-going basis. The contractor shall submit an event capture plan to NASA no later than thirty (30) days from the start of the contract. Capturing/archiving this data will ensure that NASA HQ and other stakeholders receive timely information regarding the NASA SEMAA project.

Training
The contractor shall provide training at new NASA SEMAA sites on the NASA approved NASA SEMAA Curriculum Enhancement Activities. The contractor shall:
Provide each site with at least two (2) sets of NASA SEMAA Curriculum Enhancement Activities; and as required, supply resource materials unique to the NASA SEMAA project such as moon maps or templates.
Provide AEL training with an emphasis on linkages between the classroom activities and the AEL workstations.
Supply NASA SEMAA sites with lists of resources, materials, and supplies utilized in the NASA SEMAA project and other relevant NASA publications, educational products and projects.
Train new sites on the NASA SEMAA educational model including: class sessions, field trips, family component, recognition programs, reporting systems, financial matters, publicity, quality assurance, and other aspects required by NASA.

Train current NASA SEMAA sites and new sites on upgrades to the NASA SEMAA Curriculum Enhancement Activities.
Develop and implement a method to obtain feedback from each site on the effectiveness of the training.
Ensure that training is suitable to the NASA SEMAA model being implemented at the site; i.e., Saturday model, after-school model, and in-school model.
Provide additional training to existing NASA SEMAA sites on an as requested basis and at the expense of the requesting site.

1b. Coordinate Activities of the National SEMAA Office
The contractor shall be responsible for all aspects of managing the NSO. The activities specific to the NSO are as follows:

Personnel
In the event of any key personnel changes in the NSO, NASA shall be notified within ten days of the change. The contractor shall identify each key position, and describe the responsibilities associated with the position. For the purposes of this solicitation, NASA considers the National SEMAA Director and the AEL Project Manager as key personnel. The contractor may identify other key personnel, as deemed appropriate.

National Committees
The contractor shall assemble National Committees to address issues or to respond to actions that are key to the success of the NASA SEMAA Project. These committees may be ad hoc or standing; they shall be led by the NSO and consist (at a minimum) of NASA SEMAA site directors, representatives from education (K-12), colleges, business/industry, government, and communities.

New NASA SEMAA Sites
The contractor shall work with NASA to develop a solicitation to competitively select new NASA SEMAA sites. Since NASA SEMAA sites have sub-contract agreement with the NSO, the NSO will manage the solicitation process. The contractor shall submit recommendation to NASA for approval.

Once new NASA SEMAA sites are selected, the contractor shall:
Work with the new site to plan a "kick off/initial planning session" for the project
Conduct training (as indicated above)

NASA SEMAA Site Close-out
A NASA SEMAA Site may be Closed-out due to lack of funding. If this occurs, the contractor shall work with NASA to develop and implement a procedure to close the NASA SEMAA Site. The plan shall include a list of the remaining NASA SEMAA supplies and equipment; and status of the AEL at a minimum. The plan shall be due to NASA no later than 90 days from the contract award date.

NASA SEMAA Alumni Sites
NASA SEMAA Alumni Sites are sites that no longer receive NASA funding but have sustained funding through partnerships. The contractor shall work with NASA to develop a model for expectations, operations and communications of NASA SEMAA Alumni sites.).

Travel
All travel incurred by this contract shall be made in at least two (2) weeks in advance in order to obtain the lowest airfare rates if possible.

SEMAA Web Page
The contractor shall work with NASA to update and maintain the content of the SEMAA Web Page on the NASA portal web page to ensure relevance and accuracy.

SEMAA Director's Meeting
The contractor shall be responsible for planning and coordinating all aspects of a NASA SEMAA Director's meeting, which shall be held at least once per year and include NASA participation. The Director's meeting shall provide a venue for specialized training, and rollout of new project features at a minimum. NASA approval for the Director's meeting must be obtained at least (60 days) before meeting date.

The planning and coordinating shall include**:**
Obtaining NASA approval for meeting dates, site location, agenda and content.

The contractor shall incur all cost associated with the Directors meeting for the NASA SEMAA Directors and up to two other staff members if required to attend. Cost will include but not be limited to lodging, travel, meals, and supplies.

Subtask 2 – Aerospace Education Laboratory (AEL)
The AEL features workstations that provide a unique learning experience regarding aerospace technology. The AEL was developed to support the middle and high school components of the NASA SEMAA Project; however, NASA SEMAA Site Directors are encouraged to use the AELs for training educators and community outreach.

The AEL workstations are equipped with aerospace hardware and software that model real-world challenges in the areas of aeronautics and microgravity. In ten (10) unique workstations, visitors can explore technology through 'hands on/minds on' activities that model real-world challenges in aerospace.

For the purpose of this solicitation, the contractor shall install AELs for new SEMAA sites and monitor existing AELs. Responsibilities associated with each effort are detailed below:

2a. AEL Installation

The contractor shall be responsible for the installation of AELs for new SEMAA sites. For each AEL the contractor shall provide engineering, integration, implementation, and consulting support and services. Initially, this will require travel to the sites for facility evaluation, systems delivery and set-up, and system integration and test. After installation, the contractor shall provide training to the AEL staff and on-going technical support. The contractor shall provide NASA with an AEL Technical Support Plan no later than ninety (90) days from the start of the contract.

AEL Manual

The contractor shall train the AEL staff on the functionality of the AEL Workstations, and provide each site a copy of the AEL Manual which provides enhanced procedures, software hierarchy information and other data necessary to properly maintain an AEL. The contractor shall work with NASA to update the AEL Manual to incorporate enhancements regarding technology, software, and NASA R&D projects changes. No later than ninety (90) days from the NSO contract start date, the contractor shall submit to NASA a revised version of the AEL Manual.

2b. Monitor AELs

The contractor shall be responsible for overseeing the management and operations of the NASA SEMAA site AELs via NASA SEMAA site subcontracts (see Task 1a). The contractor shall serve in a consulting and/or advisory capacity for the AELs by telephone or e-mail and shall respond to each site in a timely manner. The contractor shall notify NASA of significant issues regarding the AELs via written correspondence. (E-mail is acceptable.)

The contractor shall follow-up on action items related to AELs as requested by NASA or sites, within ten (10) days of said request. The contractor shall:

Provide configuration management data for each AEL site
Provide consulting and help desk services for AEL Coordinators
Assess and evaluate hardware, software, curriculum enhancement activities and upgrades at existing AEL sites
Provide NASA with quarterly report which includes participation data for all NASA SEMAA AELs and Outreach AEL sites (see Task 4a).

The contractor shall work with the NASA SEMAA sites regarding the maintenance and repair of AEL equipment. This support shall include, but not be limited to, telephone troubleshooting, and providing assistance/information regarding warranty repairs, and on-site trouble shooting/repairs at the expense of the NASA SEMAA site. Sites may also ship AEL equipment to the contractor for repair. The contractor shall notify NASA (in writing, e-mail is acceptable) of all AEL maintenance issues. This notification shall include a description of the problem, the resolution of the problem, and the time required to resolve the problem.

The contractor shall also be responsible for monitoring the operations of Outreach AELs. The contractor shall work with NASA to develop a plan for operations of

and communications with Outreach AEL sites. The plan shall include guidelines for communicating with the sites, as well as reporting requirements for the sites.

In performing Task 2; the contractor shall work with NASA to develop assessment and evaluation tools to determine the status of each AEL, as well as the effectiveness of existing hardware, software, curriculum enhancement activities and upgrades. This assessment shall take into account the age of each AEL and the operational efficiency of each AEL. The contractor shall determine which enhancements are required, and which enhancements are optional to ensure that the NASA SEMAA Project delivers state-of-the-art technology and current/relevant curriculum enhancement activities to all NASA SEMAA participants. Additionally, the contractor shall work with NASA to determine the feasibility of developing AEL activity modules which are portable to enhance outreach into local schools and the community. A report regarding the findings of this assessment shall be provided to NASA no later than ninety (90) days from the start of the contract.

A list of current AELs can be found in Appendix H.

Subtask 3 – Special Projects

The contractor shall conduct and promote special projects that will engage NASA SEMAA students, families and teachers in STEM activities while not actively participating in a NASA SEMAA session. Other activities that are considered special projects include enhancements to the three key components of the NASA SEMAA project (Curriculum Enhancement Activities, Aerospace Education Laboratory, and the Family Café).

Upon receiving a Statement of Work from NASA to conduct a special project, the contractor shall provide a proposal, including a budget for developing and implementing the project.

The contractor shall work with NASA to establish guidelines for developing and implementing special projects. This includes but is not limited to recruitment, and project evaluation (aligned with NASA's Education Outcomes, and Operating Principles) and assessment.

NASA anticipates conducting/supporting special projects which include but are not be limited to:

Family Involvement support for NASA Projects
NASA SEMAA Awareness Days
Professional Development

Special projects shall be added to the contract via task order amendments when requested and supported with funding. NASA does not anticipate more than six special projects per year.

Subtask 4 –Reporting and Evaluation

For the purpose of this solicitation, the reports and evaluations required for this effort are detailed below:

4a. Reports
The contractor shall furnish the reports listed below in accordance with the specified guidelines.

Standard Operating Plan
The contractor shall work with NASA to develop SOP templates which shall include the following:
Project Goals and Objectives
Extended Learning Activities Plan
Outreach Plan
Metrics and benchmarks
List of tasks from the NASA SEMAA contract Statement of Work including timelines for accomplishing tasks.
Detailed Budget Projections.
Procedure for receiving funds from the NSO.
Participant tracking.

In September of each year the NSO shall submit a Standard Operating Plan (SOP) for the upcoming fiscal year beginning October 1 and ending September 30 of the following year.
The SOP is to be delivered to NASA no later than the third Friday in September of the current fiscal year.

Where appropriate, reports shall be submitted electronically to NASA. NASA will work with the contractor to develop a mechanism to ensure that all reports are transmitted to NASA by the dates set forth in the SOW.

Quarterly Technical Progress Narrative Report
The contractor shall submit to NASA a quarterly Technical Progress Narrative Report. NASA will work with the contractor to develop a template for this report. This report shall include at a minimum:
Introduction
Technical Progress covering specific tasks performed in the past (3) months
AEL usage/participants for NASA SEMAA and stand-alone AELs
Detailed Budget Report (depicting actual expenses and balances of funds)
Administrative (including monitoring of NASA SEMAA sites)
Travel/ Meetings/Conferences held or attended during the performance period.
Issues, Concerns and/or Recommendation from NSO and NASA SEMAA sites.
Current Project Schedule including milestones and timelines

The contractor shall monitor NASA SEMAA site data collection and reporting into approved data information system. NASA will work with the contractor to develop guidelines for quarterly reporting. The contractor shall submit non-compliance

letters to any NASA SEMAA site not adhering to quarterly reporting guidelines set forth in the SOW.

Annual Report
The contractor shall produce an annual report highlighting the accomplishments of the NASA SEMAA project. The contractor shall:
Work in coordination with NASA to establish Annual Report format and content.
Submit a draft copy of the Annual Report to NASA for approval at least 30 days before publishing.

4b. Evaluation
The NASA SEMAA project will be evaluated in accordance with the following guidelines:
Office of Education Performance Measurement (OEPM)
The contractor shall:
Ensure that all NASA SEMAA sites require participants (including families) to complete a *"participants"* evaluation instrument at the end of each academic session, and each summer session using OEPM or in hard-copy form where computers may not be available.
Ensure that each NASA SEMAA site enters its OEPM data after completion of each session.
Submit non-compliance letters to any NASA SEMAA site not adhering to the evaluation guidelines set forth in the SOW.

With NASA approval, the contractor shall implement projects or take necessary actions to enhance and expand project based on evaluation results.

Third-Party Evaluation
NASA's Office of Education at NASA Headquarters will be responsible for conducting an outside evaluation of the NASA SEMAA Project including the NSO and the NASA SEMAA sites. The NSO will be notified at least 30 days prior to a planned third party evaluation of the NASA SEMAA project.

Tracking of SEMAA Participants
The contractor shall work with NASA to develop a mechanism to track the following data (as a minimum) regarding SEMAA participants:
Registration information
Session Attendance
Re-enrollment
Middle and High school course selection
The SEMAA tracking model shall be submitted to NASA for review and approval.

SCENARIO 1

OVERVIEW

The NASA scholarship/internship is a competitive scholarship opportunity for undergraduate students specifically targeting rising sophomores and juniors from underrepresented and underserved groups in STEM disciplines. Scholars who maintain the required minimum 3.0 GPA may renew through their senior year. Eligible Scholars are required to participate in paid internships at NASA Centers each summer. Other Scholar benefits include academic, leadership other related student service. The project addresses the critical workforce shortage in STEM fields that the Nation is facing by providing assistance and support to students during the early years of their collegiate experience.

PROJECT REQUIREMENTS

1. Expand STEM expertise of and opportunities for, undergraduate STEM majors for underrepresented and underserved groups in STEM disciplines.
    a. Providing scholarships and internship stipends to 100+ students; promoting, supporting, and providing avenues for the learning of new concepts and disciplines in STEM presented by NASA and other STEM-based organizations.
2. Provide student support services to encourage Project scholars' academic success.
    a. Monitoring and advising scholars on coursework; design, develop, implement and evaluate a tutoring plan for scholars who are at GPA risk;
    b. Design, develop, implement and evaluate a formal mentoring program for all scholars.
3. Provide research and professional development experiences for Scholars.
    a. Annual Project Orientation and leadership Development events for all scholars.
    b. Planning, logistics, implementation and evaluation of a NASA Facility Summer Internship experience and requirements.
    c. Support the planning and logistics of conference travel and presentations for competitively selected scholars.

QUESTIONS

Please give examples to the following questions:

1. Demonstrate how scholars from populations that are underrepresented and underserved in STEM fields, i.e., underserved women and persons with disabilities and underrepresented persons from racial and ethnic groups (currently African Americans, Hispanic/Latinos, Native Americans and Pacific Islanders) will be ***recruited and retained*** in STEM disciplines, from undergraduate through entry into graduate school and/or scientific and technical workforce.

2. Describe your approach to public engagement and promotion and include details on specific opportunities and mechanisms to collaborate and partner, if any, with organizations that will be leveraged to ensure a diverse balance of scholar participants.
3. Outline a plan to work with NASA management in addressing internal and external evaluations and reviews.

SCENARIO 2

OVERVIEW

An aspect of the NASA Explorer Schools project is to support educators in the high quality engagement of students in STEM content by offering a menu of inquiry based lesson plans with associated professional development. Professional development is delivered through pre-scheduled synchronous collaborative technologies and self-guided modules available to educators 24 hours a day. The professional development is focused on increasing teacher comfort and confidence with the delivery of NASA resources and STEM topics in the classroom. Classroom materials were developed to utilize NASA's unique mission of research and discovery as a context for student learning and career interest. Classroom materials are supplemented with the opportunity for live chats with NASA subject matter experts and a weekly Emmy Award winning video series that introduces students to current NASA research and STEM careers.

PROJECT REQUIREMENTS

1. Curriculum Development
    a. Content Selection
    b. Curriculum Development – serve as subject matter and project management lead on development of online NASA NOW episodes.
2. Educator Professional Development
    a. Recommend a strategy for the delivery of live (synchronous) professional development to educators through collaborative tools around the menu of existing content within the Virtual Campus. Strategy should include:
        - teacher event registration process and procedures
        - content delivery technology
        - mechanism for tracking teacher attendance and participation
        - help desk to participants following live event via phone and email
3. NASA Virtual Campus Support
    a. Collaborate with the NASA Education Portal team to populate the virtual campus; recommending new and/or updated NASA features and develops text for website elements.
4. Project Awareness and Promotional Activities
5. Participant Recognition
    a. Develop and implement evaluation criteria to provide public recognition and research or other opportunities to schools and individual students and teachers.
6. Data Collection and Reporting
    a. Develop and review annually internal data collection policies and procedures.
7. Continuous Project Improvement
    a. Support external evaluators, provide data and project feedback to internal and external panels of experts.

b. Develop and implement a continuous project improvement strategy to refine the project.

QUESTIONS

Please give examples to the following questions:

1. How would you go about developing a strategy, based on current STEM research and evidence and best practices to provide pertinent professional development to educators around a menu of NASA content through technology? What collaborative tools, technologies, strategies and supports would you recommend to NASA to deliver professional development to teachers and support implementation?
2. What metrics and data collection strategies would you recommend to NASA to demonstrate return on investment for educator professional development and associated classroom lessons?
3. You will need to work across NASA Centers to identify subject matter experts to support the development of new content and professional development offerings please provide your strategy to accomplish this task?

APPENDIX H: NASA AEROSPACE EDUCATION LABORATORIES (AELs) – (as of 7/6/2012)

NASA Aerospace Education Laboratories (AEL)

	SEMAA AEL Sites	Basic AEL	Drop Tower	*MRL
1	Albany State University	Yes	No	Yes
2	Cuyahoga Community College	Yes	Yes	No
3	Fernbank Science Center	Yes	Yes	No
4	Hartnell College	Yes	Yes	Yes
5	Martin University	Yes	Yes	Yes
6	Martinsville City Public Schools	Yes	No	No
7	Morgan State University	Yes	No	No
8	New Mexico State University	Yes	No	No
9	Oglala Lakota College	Yes	No	No
10	SECME/Tennessee State University	Yes	No	No
11	University of Texas El Paso	Yes	Yes	Yes
12	Warren County SEMAA	Yes	No	No
13	Wayne State University	Yes	No	No
14	West Virginia State University (Institute)	Yes	Yes	Yes
15	West Virginia State University (Beckley)	Yes	Yes	Yes
16	York College/CUNY	Yes	No	No
	Non SEMAA AEL Sites			
17	Kent Intermediate Schools	Yes	No	No
18	Lorain City Schools	Yes	No	No
19	New York Center for Space Science Education	Yes	No	No
20	Richland County School District One	Yes	No	No
21	Southfield High School Michigan	Yes	No	No
22	University of Puerto Rico	Yes	No	No
23	Windward Community College	Yes	Yes	No

*MRL: Mars Robotic Laboratory